

AMENDMENTS TO THE CLAIMS:

This listing of claims replaces all prior versions and listings of claims in the application:

LISTING OF CLAIMS:

1. (Currently Amended) A method of modeling a logic design, comprising:
creating a graphical representation of the logic design; ~~and~~
receiving a selection that corresponds to a type of simulation code; and
generating simulation code based on the graphical representation and the selection.
2. (Original) The method of claim 1, wherein the graphical representation is comprised of functional block diagrams and virtual wires that interconnect the functional block diagrams.
3. (Original) The method of claim 2, wherein creating comprises:
retrieving the functional block diagrams from a database; and
arranging the functional block diagrams and the virtual wires to model the logic design.
4. (Original) The method of claim 2, wherein creating comprises:
defining the functional block diagrams using simulation code; and
arranging the functional block diagrams and the virtual wires to model the logic design.

5. (Original) The method of claim 1, further comprising:

displaying a menu comprised of different types of functional block diagrams;

receiving an input selecting one of the different types of functional block diagrams;

retrieving a selected functional block diagram; and

creating the graphical representation of the logic design using the selected functional block diagram.

6. (Currently Amended) The method of claim 1, further comprising:

propagating a state through the simulation code; and

determining if there is an error in the logic design based on ~~the~~ a propagated state.

7. (Original) The method of claim 6, wherein the state comprises one of a zero state, a one state, and an undefined state.

8. (Original) The method of claim 6, further comprising:

providing a visual indication if there is an error in the graphical representation of the logic design.

9. (Currently Amended) A method comprising:

displaying a menu comprised of different types of functional block diagrams;

receiving an input selecting one of the different types of functional block diagrams;

receiving a selection that corresponds to a type of simulation code;
retrieving a selected functional block diagram; ~~and~~
creating a graphical representation of a logic design using the selected functional block
diagram; and
generating simulation code to simulate operation of the logic design based on the
graphical representation and the selection;

wherein creating comprises:

interconnecting the selected functional block diagram with one or more other
functional block diagrams to generate a model of a the logic design; and

defining the selected functional block diagram using the type of simulation code if
a function of the selected functional block diagram is undefined when retrieved.

10. (Currently Amended) The method of claim 9, further comprising:

~~generating simulation code to simulate the operation of the logic design;~~ and
testing the logic design by propagating one or more states through the simulation code
that simulates operation of the logic design.

11. (Currently Amended) An article comprising a machine-readable medium that stores
executable instructions for modeling a logic design, the instructions causing a machine to:

create a graphical representation of the logic design; ~~and~~
receive a selection that corresponds to a type of simulation code; and

generate simulation code based on the graphical representation and the selection.

12. (Original) The article of claim 11, wherein the graphical representation is comprised of functional block diagrams and virtual wires that interconnect the functional block diagrams.

13. (Original) The article of claim 12, wherein creating comprises:

retrieving the functional block diagrams from a database; and

arranging the functional block diagrams and the virtual wires to model the logic design.

14. (Original) The article of claim 12, wherein creating comprises:

defining the functional block diagrams using simulation code; and

arranging the functional block diagrams and the virtual wires to model the logic design.

15. (Original) The article of claim 11, further comprising instructions that cause the machine to:

display a menu comprised of different types of functional block diagrams;

receive an input selecting one of the different types of functional block diagrams;

retrieve a selected functional block diagram; and

create the graphical representation of the logic design using the selected functional block diagram.

16. (Currently Amended) The article of claim 11, further comprising instructions that cause the machine to:

propagate a state through the simulation code; and

determine if there is an error in the logic design based on ~~the~~ a propagated state.

17. (Original) The article of claim 16, wherein the state comprises one of a zero state, a one state, and an undefined state.

18. (Original) The article of claim 16, further comprising instructions that cause the machine to:

provide a visual indication if there is an error in the graphical representation of the logic design.

19. (Currently Amended) An article comprising a machine-readable medium that stores executable instructions that cause a machine to:

display a menu comprised of different types of functional block diagrams;

receive an input selecting one of the different types of functional block diagrams;

receive a selection that corresponds to a type of simulation code;

retrieve a selected functional block diagram; ~~and~~

create a graphical representation of a logic design using the selected functional block diagram; and

generate simulation code to simulate operation of the logic design based on the graphical representation and the selection;

wherein creating comprises:

interconnecting the selected functional block diagram with one or more other functional block diagrams to generate a model of a the logic design; and

defining the selected functional block diagram using the type of simulation code if a function of the selected functional block diagram is undefined when retrieved.

20. (Currently Amended) The article of claim 19, further comprising instructions that cause the machine to:

~~generate simulation code to simulate the operation of the logic design; and~~

test the logic design by propagating one or more states through the simulation code that simulates operation of the logic design.

21. (Currently Amended) An apparatus for modeling a logic design, comprising:

a memory that stores executable instructions; and

a processor that executes the instructions to:

create a graphical representation of the logic design; ~~and~~

receive a selection that corresponds to a type of simulation code; and

generate simulation code based on the graphical representation and the selection.

22. (Original) The apparatus of claim 21, wherein the graphical representation is comprised of functional block diagrams and virtual wires that interconnect the functional block diagrams.

23. (Original) The apparatus of claim 22, wherein creating comprises:
retrieving the functional block diagrams from a database; and
arranging the functional block diagrams and the virtual wires to model the logic design.

24. (Original) The apparatus of claim 22, wherein creating comprises:
defining the functional block diagrams using simulation code; and
arranging the functional block diagrams and the virtual wires to model the logic design.

25. (Original) The apparatus of claim 21, wherein the processor executes instructions to:
display a menu comprised of different types of functional block diagrams;
receive an input selecting one of the different types of functional block diagrams;
retrieve a selected functional block diagram; and
create the graphical representation of the logic design using the selected functional block diagram.

26. (Currently Amended) The apparatus of claim 21, wherein the processor executes instructions to:

propagate a state through the simulation code; and

determine if there is an error in the logic design based on ~~the~~ a propagated state.

27. (Original) The apparatus of claim 26, wherein the state comprises one of a zero state, a one state, and an undefined state.

28. (Original) The apparatus of claim 26, wherein the processor executes instructions to: provide a visual indication if there is an error in the graphical representation of the logic design.

29. (Original) An apparatus comprising:
a memory that stores executable instructions; and
a processor that executes the instructions to:
display a menu comprised of different types of functional block diagrams;
receive an input selecting one of the different types of functional block diagrams;
receive a selection that corresponds to a type of simulation code;
retrieve a selected functional block diagram; and
create a graphical representation of a logic design using the selected functional block diagram; and
generate simulation code to simulate operation of the logic design based on the graphical representation and the selection;

wherein creating comprises:

interconnecting the selected functional block diagram with one or more other functional block diagrams to generate a model of a the logic design; and

defining the selected functional block diagram using the type of simulation code if a function of the selected functional block diagram is undefined when retrieved.

30. (Currently Amended) The apparatus of claim 29 49, wherein the processor executes instructions to:

~~generate simulation code to simulate the operation of the logic design; and~~

test the logic design by propagating one or more states through the simulation code that simulates operation of the logic design.